



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,930	09/26/2001	Maurice L. James	005950-742	2190

7590 12/22/2003

William H. Benz  
BURNS, DOANE, SWECKER & MATHIS, L.L.P.  
P.O. Box 1404  
Alexandria, VA 22313-1404

EXAMINER

KRECK, JOHN J

ART UNIT	PAPER NUMBER
----------	--------------

3673

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/964,930

Applicant(s)

JAMES ET AL.

Examiner

John Kreck

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 22-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-29,32 is/are rejected.
- 7) ☒ Claim(s) 30,31 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

The amendment dated 9/15/03 has been entered.

Claims 22-33 are pending.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 22-25, 29, and 32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over RMOTC "Bentonite Well Plugging Technique" in view of Armentrout (U.S. Patent number 2,836,555).

The RMOTC publication teaches the method steps of introducing nodules into the well and permitting the nodules to come into contact with additional water to swell and form a plug. The RMOTC publication fails to teach the composition of the nodules, other than that they are "bentonite pellets"

Armentrout teaches nodules comprising bentonite in admixture with water, which are disclosed for use in wells. Armentrout fails to explicitly disclose the proportion of water to form compacted nodules having a density of 2.0g/cc; mean particle survival at crush of 800 N and 50% survival at a drop of 1.5 meters onto concrete. Armentrout does however disclose a nodule with water content similar to that disclosed by applicant

Art Unit: 3673

and compression forces similar to those disclosed by applicant. Since the Armentrout nodules have a similar composition (see col. 5, line 15 for water content) and are compacted with the same forces; it is apparent that the density, crush force, and drop survival as called for in claim 22 are inherent in the Armentrout nodules. The Armentrout nodules are disclosed as advantageous in that they delay hydrating until they are deep in the well.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the RMOTC process with the nodules taught by Armentrout, having the properties called for in claim 22, in order to delay hydrating until they are deep in the well.

With regards to claim 23; the RMOTC teaches the introducing into the bottom of the well by falling.

RMOTC also teaches the introducing over the length of the well as called for in claim 24.

RMOTC also teaches the introducing the nodules into one portion of the length of the well and introducing nonbentonite material over at least one other portion as called for in claim 25.

RMOTC fails to explicitly teach the saline water in the well. Saline water is common in wells, (as disclosed on page 5, line 4 of applicant's specification) especially in offshore wells. It would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the RMOTC invention, as modified, in a well with saline water as called for in claim 29, in order to plug an offshore well.

With regards to claim 32, Armentrout teaches spheres, but fails to teach the diameter from about 1 inch to 6 inches.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the RMOTC process to make the nodules having a diameter of from about 1 inch to 6 inches as called for in claim 32, in order to plug larger holes, for example; since such a modification would have involved a mere change in size. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose 105 USPQ 237 (CCPA 1955).

2. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over RMOTC in view of Armentrout as applied to claim 22 above, and further in view of Fraser (U.S. Patent number 47,410).

The RMOTC reference fails to explicitly disclose the introducing heat into the well, introducing hot water into a well containing viscous material, or introducing hot water before the nodules.

It is well known and old to use hot water in wells, in order to reduce the viscosity of viscous materials. This is taught by Fraser. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the RMOTC method to have included introducing heat into the well, as called for in claim 26; introducing hot water into the well to reduce the viscosity of viscous material as called for in claim 27; or introducing hot water prior to introducing the nodules as called for in claim 28. This would have been obvious in order to help improve the well flow, as taught by Fraser.

***Allowable Subject Matter***

3. Claims 30, 31 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's argument with respect to claim 22 that the Armentrout reference fails to teach "plugging" are persuasive.

5. Applicant's further arguments with respect to claim 22-25 have been considered but are moot in view of the new ground(s) of rejection.

6. It is noted that applicant has failed to explicitly traverse the assertion that the Armentrout nodules inherently have the claimed properties (e.g. density, particle survival, etc); thus the Armentrout nodules are taken to be admitted prior art. Applicant's arguments that the Armentrout reference teaches additional features (e.g. coating, holes) are not persuasive evidence that the compaction and water content of the Armentrout nodules do not inherently result in the claimed properties.

7. With regards to claim 29; the rejection is based on applicant's own disclosure that saline water is common in wells.

8. With regards to claim 32; a change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose 105 USPQ 237 (CCPA 1955).


Art Unit: 3673

9. With regards to claims 26-28; it is noted that applicant has argues that the "teaching of adding heat to unplug a blocked well teaches directly away from claims 26-28". This is in apparent conflict with applicant's disclosure in paragraph 62, which indicates that the heat is used to reduce viscosity. Insofar as applicant has argued that the removal of paraffin teaches against well plugging in general (as disclosed in the RMOTC reference, for example); one of ordinary skill in the art would know that the "plugging" of a well by paraffin is fundamentally different from the intentional plugging of a well for abandonment; no petroleum engineer would rely on a paraffin "plug" to seal a well for abandonment.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is (703)308-2725. The examiner can normally be reached on M-F 5:30 am - 2:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703)308-2978. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-4177.



John Kreck  
Examiner  
Art Unit 3673

JJK